

ACMO SAMPLE PATIENT 1

Demographics

42-year-old black male; accountant

Chief complaint

"My left eye is red and irritated."

History of present illness

Character/signs/symptoms: redness and irritation

Location: OS

Severity: 7/10 on pain scale

Nature of onset: acute

Duration: 2 weeks

Frequency: constant

Exacerbations/remissions: none

Relationship to activity or function: none

Accompanying signs/symptoms: photophobia

Secondary complaints/symptoms

blurred vision in left eye

Patient ocular history

metallic corneal foreign body OS 5 years ago

Patient medical history

unremarkable

Medications taken by patient

no relief with TobraDex[®] q.i.d. OS x 1 week

Patient allergy history

NKMA

Family ocular history

unremarkable

Family medical history

father: lung cancer

Review of systems

Constitutional/general health: denies

Ear/nose/throat: denies

Cardiovascular: denies

Pulmonary: denies

Endocrine: denies

Dermatological: cold sore on lower lip

Gastrointestinal: denies

Genitourinary: denies

Musculoskeletal: denies

Neuropsychiatric: denies

Immunologic: denies

Hematologic: denies

Mental status

Orientation: oriented to time, place, and person

Mood: normal

Affect: normal

Clinical findings

BVA: Distance

OD: 20/20

OS: 20/30

Pupils: PERRL, negative RAPD

EOMs: full, no restrictions

Confrontation fields: FTFC OD, OS

Slit lamp:

lids/lashes/adnexa: unremarkable OD, OS

conjunctiva: normal OD, 2+ diffuse injection with 1+ palpebral follicles OS

cornea: clear OD, see **Images 1, 2** OS

anterior chamber: deep and quiet OD, OS

iris: normal OD, OS

lens: clear OD, OS

vitreous: clear OD, OS

IOPs: 14 mmHg OD, 12 mmHg OS @ 3:00 PM by non-contact tonometry

Fundus OD:

C/D: 0.3H/0.35V

macula: normal

posterior pole: normal

periphery: unremarkable

Fundus OS:

C/D: 0.35H/0.4V

macula: normal

posterior pole: normal

periphery: unremarkable

Blood pressure: 126/84 mmHg, right arm sitting

Pulse: 78 bpm, regular

Image 1: following instillation of rose bengal

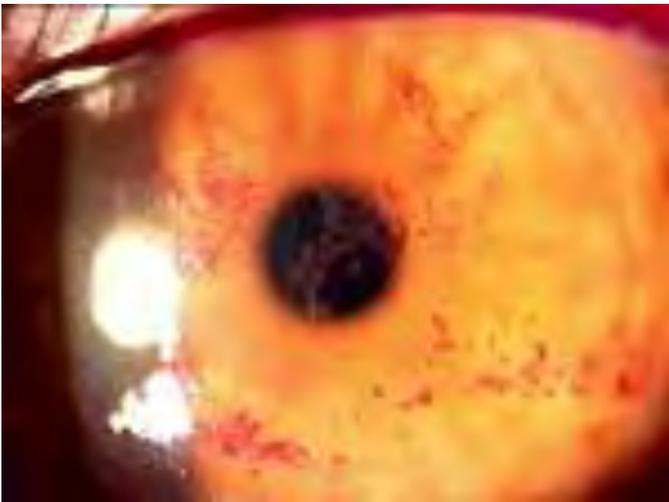
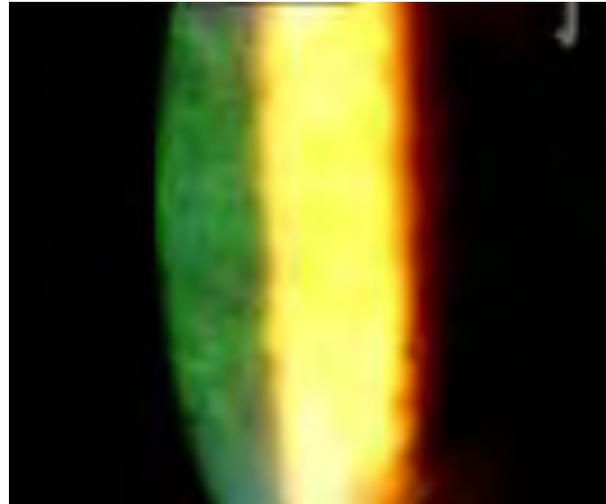


Image 2: following instillation of fluorescein



Correct answer

(Item 1 of Patient 1)

1. Which of the following is the **MOST** likely diagnosis of the patient's corneal condition OS?
 - a. Neurotrophic keratitis
 - b. Herpes simplex keratitis
 - c. Keratoconjunctivitis sicca
 - d. Recurrent corneal erosion
 - e. Pseudodendrite
 - f. Thygeson's superficial punctate keratitis

(Item 2 of Patient 1)

2. Which of the following would be **MOST** helpful in confirming the diagnosis?
 - a. Case history
 - b. Impression cytology
 - c. Corneal sensitivity testing
 - d. Phenol red thread test
 - e. Corneal topography

(Item 3 of Patient 1)

3. The condition resolved with appropriate treatment. However, the patient returns 4 months later with a recurrence of the condition plus a large area of stromal haze. Which of the following is **MOST** appropriate to treat the condition at the 4 month follow-up and to prevent recurrences?
 - a. Oral prednisone
 - b. Viroptic[®]
 - c. Oral acyclovir
 - d. Pred Forte[®]
 - e. Oral doxycycline
 - f. Restasis[®]

(Item 4 of Patient 1)

4. Which of the following ocular structures is **LEAST** likely to be affected by future manifestations of this patient's condition?
 - a. Retina
 - b. Corneal epithelium
 - c. Eyelid
 - d. Corneal endothelium
 - e. Lacrimal gland

ACMO SAMPLE PATIENT 2

Demographics

56-year-old white male; truck driver

Chief complaint

blur when reading

History of present illness

Character/signs/symptoms: blur OD, OS

Location: near

Severity: moderate

Nature of onset: gradual

Duration: 2 years

Frequency: constant

Exacerbations/remissions: none

Relationship to activity or function: worse when reading

Accompanying signs/symptoms: asthenopia

Secondary complaints/symptoms

headaches

Patient ocular history

last eye exam 5 years ago

Patient medical history

HTN; COPD; erectile dysfunction; GERD; obesity

Medications taken by patient

albuterol; cimetidine; clonidine; ipratropium; lisinopril; metoprolol; sildenafil

Patient allergy history

sulfa medications

Family ocular history

mother: glaucoma

Family medical history

father: HTN; type 2 DM; non-Hodgkins lymphoma

Review of Systems:

Constitutional/general health: obesity

Ear/nose/throat: denies

Cardiovascular: denies

Pulmonary: exertional dyspnea

Endocrine: denies

Dermatological: denies

Gastrointestinal: heartburn

Genitourinary: erectile dysfunction

Musculoskeletal: denies

Neuropsychiatric: denies

Immunologic: denies

Hematologic: denies

Mental Status:

Orientation: oriented to time, place, and person

Mood: normal

Affect: normal

Clinical findings

BVA: Distance

OD: 20/20

OS: 20/20

Pupils: PERRL, negative RAPD

EOMs: full, no restrictions

Confrontation fields: FTFC OD, OS

Slit lamp:

lids/lashes/adnexa: 1+ blepharitis OD, OS

conjunctiva: normal OD, OS

cornea: clear OD, OS

anterior chamber: deep and quiet OD, OS

iris: normal OD, OS

lens: 1+ NS OD, OS

vitreous: clear OD, OS

IOPs: 27 mmHg OD, 28 mmHg OS @ 3:00 PM by applanation tonometry

Gonioscopy: CB visible with open approach 360° OD, OS

Fundus OD:

C/D, macula, posterior pole: see *Images 1, 3*

periphery: unremarkable

Fundus OS:

C/D, macula, posterior pole: see *Images 2, 4*

periphery: unremarkable

Blood pressure: 130/85 mmHg, right arm sitting

Pulse: 64 bpm, regular

Corneal pachymetry: 498 microns OD, 499 microns OS

Visual field testing: see *Image 5 OD*, see *Image 6 OS*

Image 1



Image 2



Image 3

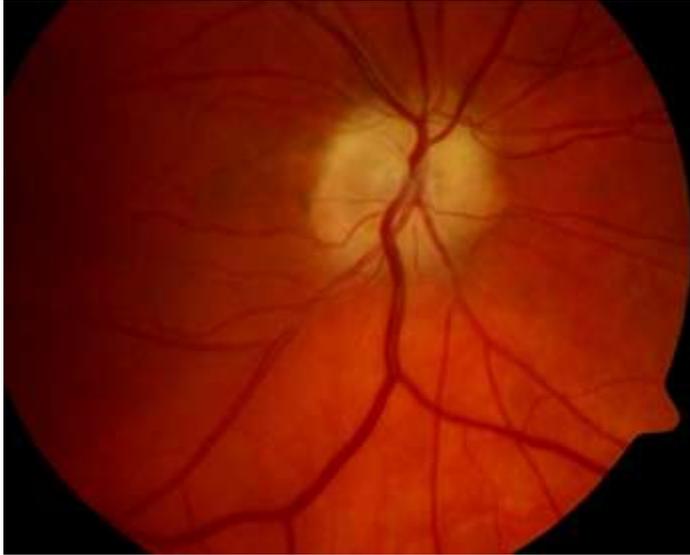


Image 4

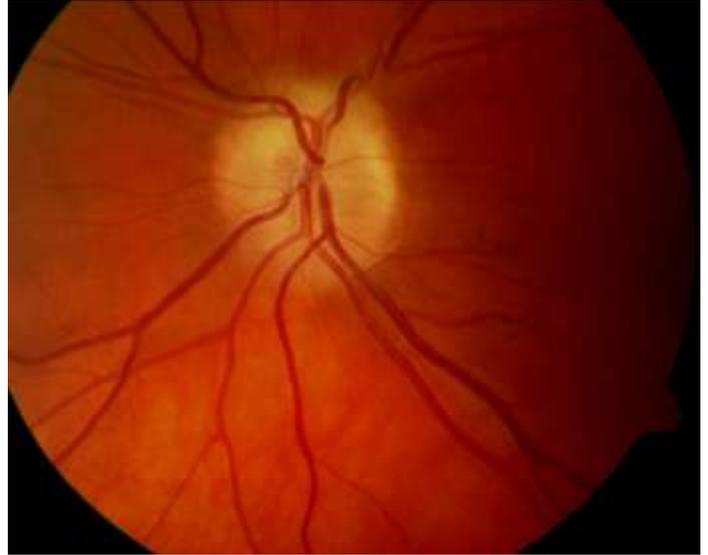


Image 6: OS

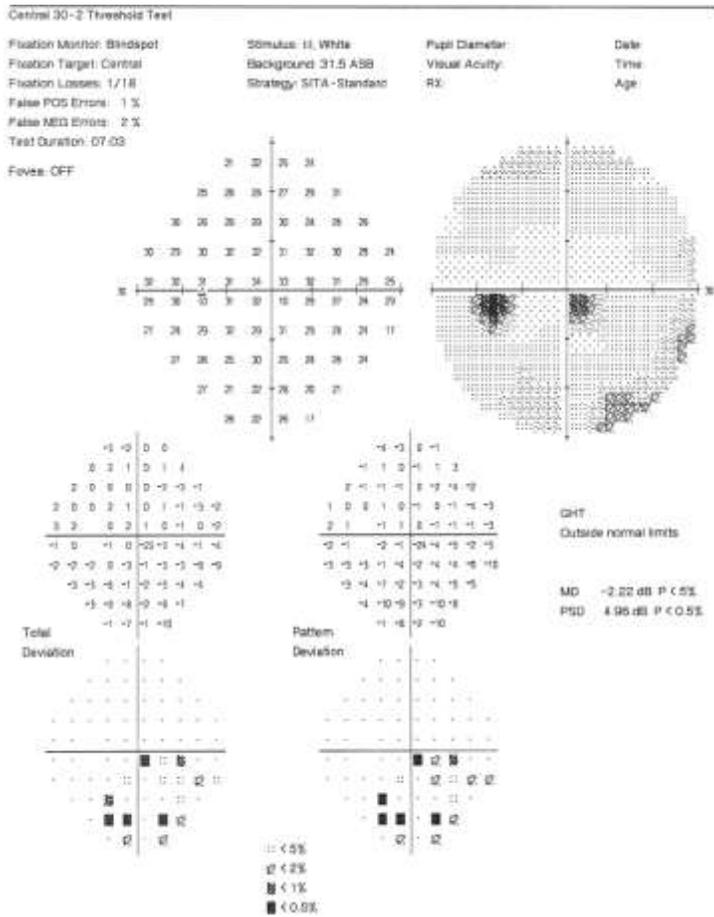
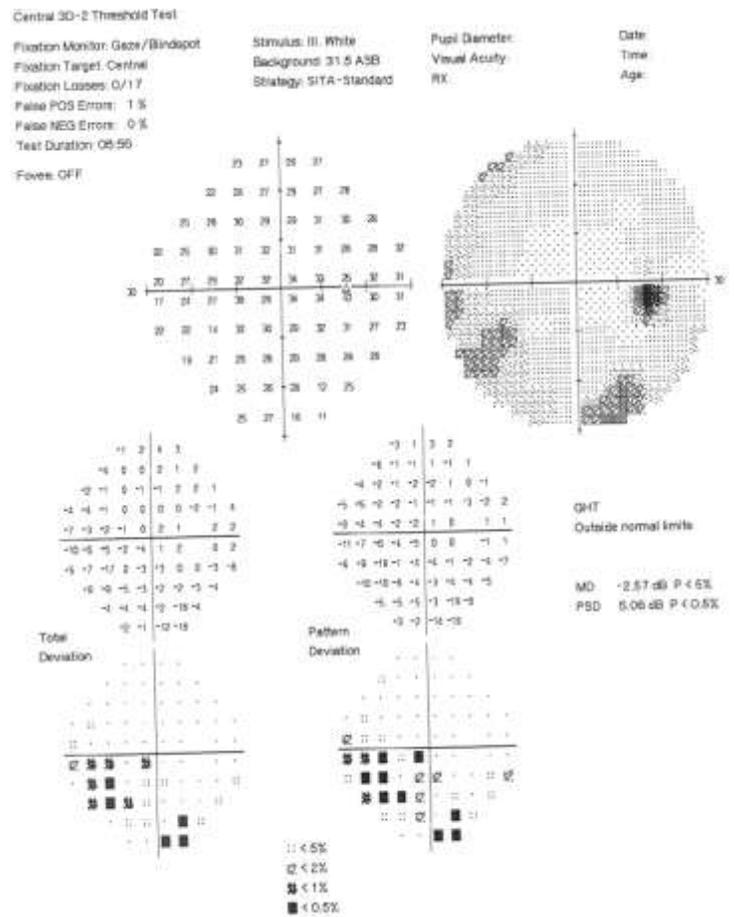


Image 5: OD



Correct answer

(Item 1 of Patient 2)

5. Which of the following is LEAST likely to be included in the differential diagnosis of this patient's posterior segment condition?

- a. AION
- b. Papilledema
- c. Optic nerve head drusen
- d. POAG

(Item 2 of Patient 2)

6. Which 2 of the following would be useful in determining the diagnosis? (Select 2 answer options)

- a. Goldmann visual field
- b. B-scan ultrasonography
- c. Lumbar puncture
- d. CT scan of the head and orbits without contrast
- e. MRI of the head and orbits with and without contrast
- f. Westergren ESR and C-reactive protein
- g. Home BP monitoring
- h. Bartonella henselae titers

(Item 3 of Patient 2)

7. Which of the following is the MOST appropriate treatment for this patient?

- a. Timoptic® 0.5% b.i.d. OU
- b. ALT 180° OU
- c. Trusopt® 2% t.i.d. OU
- d. Oral acetazolamide
- e. Travatan Z® h.s. OU
- f. Oral prednisone

(Item 4 of Patient 2)

8. Which of the following is MOST appropriate to include in the education of this patient?

- a. Driving a truck is contraindicated.
- b. A diet rich in green leafy vegetables may be beneficial.
- c. Sildenafil should be used with caution.
- d. Visual field changes will improve with time.
- e. Weight loss will improve the ocular prognosis.

ACMO SAMPLE PATIENT 3

Demographics

54-year-old white male; restaurant owner

Chief complaint

blurred vision in both eyes

History of present illness

Character/signs/symptoms: blur OD, OS

Location: near

Severity: moderate

Nature of onset: gradual onset

Duration: 2 years

Frequency: constant

Exacerbations/remissions: none

Relationship to activity or function: worse with reading

Accompanying signs/symptoms: none

Secondary complaints/symptoms

reading glasses are badly scratched

Patient ocular history

last eye exam 4 years ago

Patient medical history

depression; HTN; hyperlipidemia; erectile dysfunction

Medications taken by patient

aspirin; felodopine; simvastatin; venlafaxine; sildenafil

Patient allergy history

NKMA

Family ocular history

unremarkable

Family medical history

unremarkable

Review of systems

Constitutional: easily fatigued

Ear/nose/throat: decreased hearing L > R

Cardiovascular: denies

Pulmonary: denies

Endocrine: denies

Dermatological: denies

Gastrointestinal: colon polyps

Genitourinary: erectile dysfunction

Musculoskeletal: morning stiffness, back, hips, and legs

Neuropsychiatric: depression

Immunologic: denies

Hematologic: denies

Mental status

Orientation: oriented to time, place, and person

Mood: normal

Affect: normal

Clinical findings

BVA: Distance

OD: 20/60

OS: 20/50

Pupils: PERRL, negative RAPD

EOMs: full, no restrictions

Confrontation fields: FTFC OD, OS

Slit lamp:

lids/lashes/adnexa: unremarkable OD, OS

conjunctiva: normal OD, OS

cornea: arcus OD, OS

anterior chamber: deep and quiet OD, OS

iris: normal OD, OS

lens: 1+ NS OD, OS

vitreous: syneresis OD, OS

IOPs: 16 mmHg OD, 16 mmHg OS @ 2:00 PM by applanation tonometry

Fundus OD:

C/D, macula: see **Image 1**

posterior pole, periphery: unremarkable

Fundus OS:

C/D, macula: see **Image 2**

posterior pole, periphery: unremarkable

Imaging: plain film x-ray of the skull shows generalized thinning and demineralization

Blood pressure: 118/84 mmHg, right arm, sitting

Pulse: 88 bpm, regular

Laboratory tests:

	<u>Results</u>	<u>Reference ranges</u>
Cholesterol	235 mg/dL (H)	< 200
Alkaline phosphatase	130 U/L (H)	30 – 125
Sickle cell prep	negative	negative
Calcium	15.2 mg/dL (H)	8.7 – 11.9

Image 1



Image 2



Correct answer

(Item 1 of Patient 3)

9. Which of the following systemic diagnoses is **MOST** likely associated with this patient's ocular condition?
- a. Neurofibromatosis
 - b. Ehlers-Danlos syndrome
 - c. Pseudoxanthoma elasticum
 - d. **Paget's disease of the bone**
 - e. Sickle cell anemia

(Item 2 of Patient 3)

10. Which of the following is the **MOST** likely location of the primary ocular structural abnormality?
- a. Nerve fiber layer
 - b. Inner photoreceptor layer
 - c. Outer photoreceptor layer
 - d. Retinal pigment epithelium
 - e. **Bruch's membrane**
 - f. Choriocapillaris
 - g. Sclera

(Item 3 of Patient 3)

11. Which of the following is **MOST** appropriate to include in the management of this patient?
- a. Skin biopsy
 - b. MRI of the head
 - c. **Radioactive bone scan**
 - d. CBC with differential
 - e. IOP-lowering drugs
 - f. Hemoglobin electrophoresis

(Item 4 of Patient 3)

12. Which of the following ocular complications is **MOST** likely to occur?
- a. Peripheral retinal "sea fan" neovascularization
 - b. Branch retinal artery occlusion
 - c. **Choroidal neovascular membrane**
 - d. Rhegmatogenous retinal detachment
 - e. Enophthalmos secondary to erosion of orbital bones
 - f. Subluxation of the lens

ACMO SAMPLE PATIENT 4

Demographics

61-year-old black male; history teacher

Chief complaint

dark spot in vision in right eye

History of present illness

Character/signs/symptoms: dark spot

Location: central, OD

Severity: moderate; "I can see through it, but it is like looking through water"

Nature of onset: unsure

Duration: sudden awareness 2 days ago

Frequency: constant

Exacerbations/remissions: none

Relationship to activity or function: none

Accompanying signs/symptoms: none

Secondary complaints/symptoms

tearing in both eyes

Patient ocular history

unremarkable

Patient medical history

chronic sinusitis; osteoarthritis; atypical chest pain; colonic polyps; GERD;
type 2 DM x 7 years

Medications taken by patient

pseudoephedrine; omeprazole; acetaminophen-codeine; metformin; low-dose
enteric coated aspirin

Patient allergy history

PCN

Family ocular history

unremarkable

Family medical history

mother: type 2 DM; HTN

father: kidney transplant

Review of systems

Constitutional/general health: denies

Ear/nose/throat: sinus congestion

Cardiovascular: chest pain

Pulmonary: denies

Endocrine: denies

Dermatological: denies

Gastrointestinal: heartburn; constipation

Genitourinary: denies

Musculoskeletal: morning joint stiffness

Neuropsychiatric: denies

Immunologic: denies

Hematologic: denies

Mental status

Orientation: oriented to time, place, and person

Mood: normal

Affect: normal

Clinical findings

Habitual spectacle Rx: VA Distance
OD: -0.75 DS 20/40⁻¹
OS: -0.75 DS 20/20

Subjective refraction: VA Distance
OD: +0.25 -0.25 x 125 20/25⁻²
OS: -0.75 DS 20/20

Pupils: PERRL, negative RAPD

EOMs: full, no restrictions

Confrontation fields: FTFC OD, OS

Slit lamp:

lids/lashes/adnexa: unremarkable OD, OS

conjunctiva: benign melanosis OD, OS

cornea: clear OD, OS

anterior chamber: deep and quiet OD, OS

iris: normal without NVI OD, OS

lens: clear OD, OS

vitreous: clear OD, OS

IOPs: 10 mmHg OD, 9 mmHg OS @ 12:40 PM by applanation tonometry

Fundus OD:

C/D, macula, and posterior pole: see **Images 1, 3**

periphery: white without pressure 360°

Fundus OS:

C/D, macula, and posterior pole: see **Image 2**

periphery: white without pressure 360°

Blood pressure: 136/90 mmHg, right arm, sitting

Pulse: 65 bpm, regular

Fluorescein angiogram: see **Images 4 - 6**

OCT: see **Image 7**

Laboratory test:	<u>Result</u>	<u>Reference range</u>
HgbA _{1c}	5.7%	4.0 - 6.0

Image 1

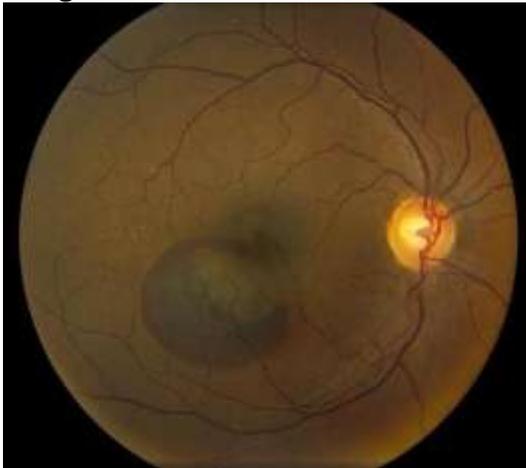


Image 2

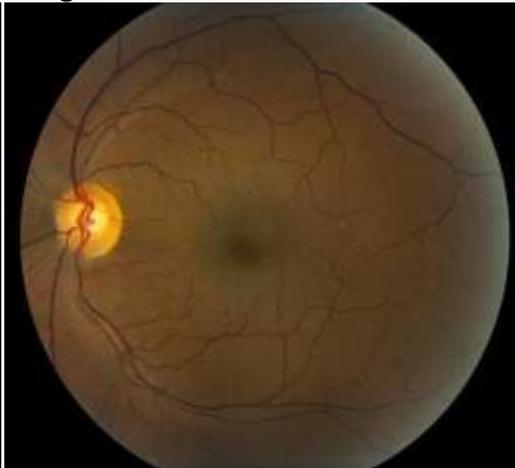


Image 3: red free



Image 4: FA at 8 sec

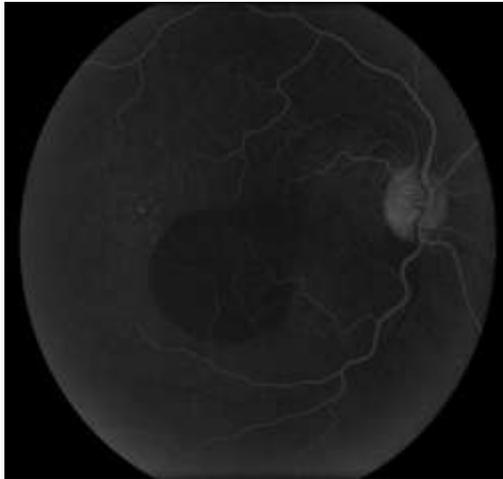


Image 5: FA at 16 sec

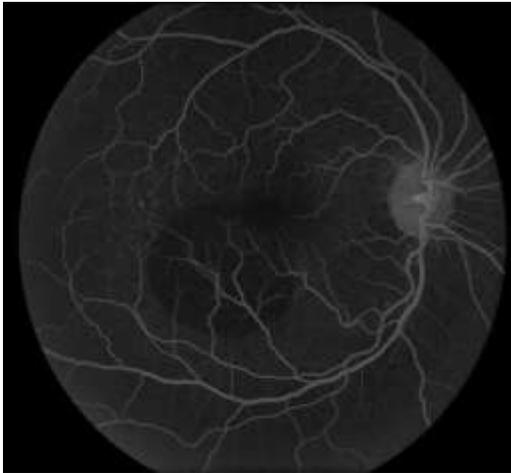


Image 6: FA at 2 min

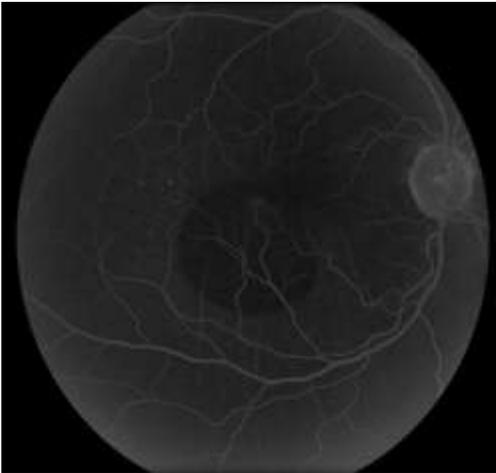
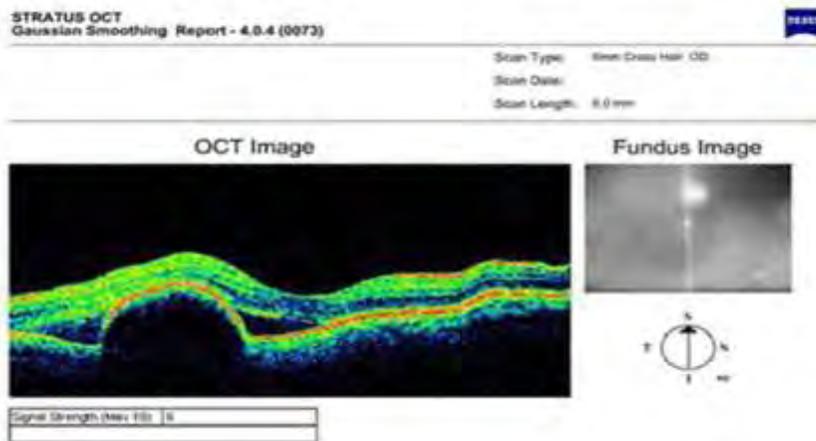


Image 7



Correct answer

(Item 1 of Patient 4)

13. Which of the following is MOST likely etiology of this patient's fundus findings OD?

- a. Choroidal neovascular membrane
- b. Retinal macroaneurysm
- c. Hypotony maculopathy
- d. Valsalva retinopathy
- e. Choroidal metastasis

(Item 2 of Patient 4)

14. This patient's OCT findings are MOST consistent with which of the following conditions?

- a. Cystoid macular edema
- b. Large confluent drusen
- c. Vitreomacular traction syndrome
- d. Retinal pigment epithelial detachment
- e. Choroidal folds
- f. Exudative retinal detachment

(Item 3 of Patient 4)

15. Which of the following is the MOST appropriate management for this patient's fundus condition OD?

- a. Photodynamic therapy
- b. Anti-VEGF intravitreal injection
- c. Pred Forte® and atropine
- d. Discontinuation of aspirin therapy
- e. Surgical evacuation of hemorrhage
- f. High fiber diet
- g. Oncology referral

(Item 4 of Patient 4)

16. Which of the following is the MOST likely source of the hyperfluorescence noted temporal to the fovea on the fluorescein angiogram OD?

- a. Drusen
- b. Microaneurysms
- c. RPE drop out
- d. Lipofuscin deposits
- e. Lipid exudates

ACMO SAMPLE PATIENT 5

Demographics

47-year-old white male; mine worker

Chief complaint

primary care consult for HA evaluation

History of present illness

Character/signs/symptoms: HA

Location: "whole head"

Severity: 6/10 on pain scale

Nature of onset: gradual

Duration: 2 months

Frequency: constant

Exacerbations/remissions: none

Relationship to activity or function: worse upon awakening

Accompanying signs/symptoms: mild photophobia

Secondary complaints/symptoms

none

Patient ocular history

wears OTC readers

Patient medical history

sinusitis; asthma; HTN

Medications taken by patient

albuterol inhaler; ibuprofen; metoprolol

Patient allergy history

NKMA

Family ocular history

mother: cataracts

father: RD

Family medical history

mother: RA

father: HTN, type 2 DM

Review of systems

Constitutional/general health: malaise; 10 pound weight loss in past 4 months

Ear/nose/throat: nasal congestion

Cardiovascular: denies

Pulmonary: dyspnea, hemoptasis

Dermatological: denies

Gastrointestinal: nausea

Genitourinary: denies

Musculoskeletal: denies

Neuropsychiatric: HA

Endocrine: denies

Hematologic: denies

Immunologic: denies

Mental status

Orientation: oriented to time, place, and person

Mood: normal

Affect: normal

Clinical findings

BVA: Distance

OD: 20/20

OS: 20/20

Pupils: PERRL, negative APD

EOMs: full, no restrictions

Confrontation fields: constricted OD, OS

Slit lamp:

lids/lashes/adnexa: MGD OD, OS

conjunctiva: normal OD, OS

cornea: clear OD, OS

anterior chamber: deep and quiet OD, OS

iris: normal OD, OS

lens: clear OD, OS

vitreous: clear OD, OS

IOPs: 13 mmHg OD, 11 mmHg OS @ 10:30 AM by applanation tonometry

Fundus OD:

C/D, macula, posterior pole: see *Image 1*

periphery: unremarkable OD, OS

Fundus OS:

C/D, macula, posterior pole: see *Image 2*

periphery: unremarkable OD, OS

Blood pressure: 152/91 mmHg, right arm, sitting

Pulse: 65 bpm, regular

Visual field testing: see *Image 3 OD*, see *Image 4 OS*

Spiral CT scan: see *Image 5*

CT scan: see *Image 6*

Laboratory tests:	<u>Results</u>	<u>Reference ranges</u>
WBC	10.8 K/ μ L	3.9 - 11.0
Neutrophil %	60.5%	49 - 78
Lymphocyte %	31.2%	20 - 45
Monocyte %	7.4%	3.0 - 9.5
Eosinophil %	0.8%	0.0 - 4.0
Basophil %	0.1%	0.0 - 3.0
Neutrophil #	6.5 K/ μ L	1.4 - 6.5
Lymphocyte #	3.4 K/ μ L	1.2 - 3.4
Monocyte #	0.8 K/ μ L	0.0 - 1.5
Eosinophil #	0.1 K/ μ L	0.0 - 1.0
Basophil #	0.0 K/ μ L	0.0 - 0.2
RBC	3.9 M/ μ L (L)	4.5 - 5.9 (male)
Hgb	12.8 g/dL (L)	13.5 - 17.5 (male)
Hct	38.5 % (L)	42 - 54 (male)
MCV	80.6 fL	80 - 103
MCH	29 pg	26 - 34
MCHC	29.4 g/dL (L)	30 - 37
RDW-CV	12.3%	11.5 - 14.5
Platelet	142 K/ μ L	130 - 400
MPV	10.2 fL	7.4 - 12.0
Glucose	108 mg/dL	60 – 109 (fasting)
BUN	15.8 mg/dL	8 - 21
Creatinine	1.2 mg/dL	0.6 - 1.3
Calcium	9.8 mg/dL	8.7 - 11.9
Sodium	138 mmol/L	136 - 146
Potassium	4.4 mmol/L	3.7 - 5.3
Chloride	109 mmol/L	101 - 111
CO ₂	27 mmol/L	21 - 31
Cholesterol	224 mg/dL (H)	< 200
Triglyceride	182 mg/dL (H)	30 - 149
HDL	107 mg/dL (H)	> 40
LDL	63 mg/dL	0 - 130

Image 1

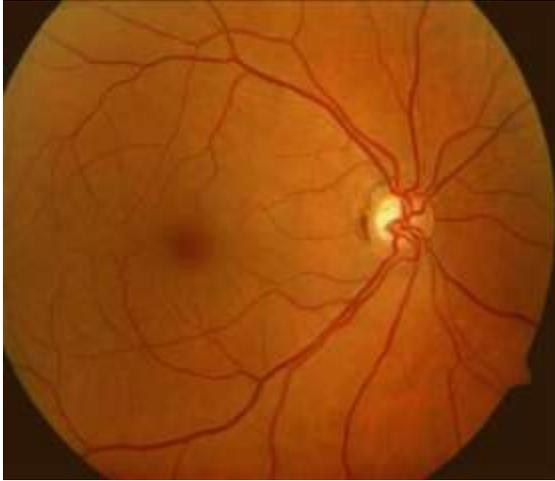


Image 2

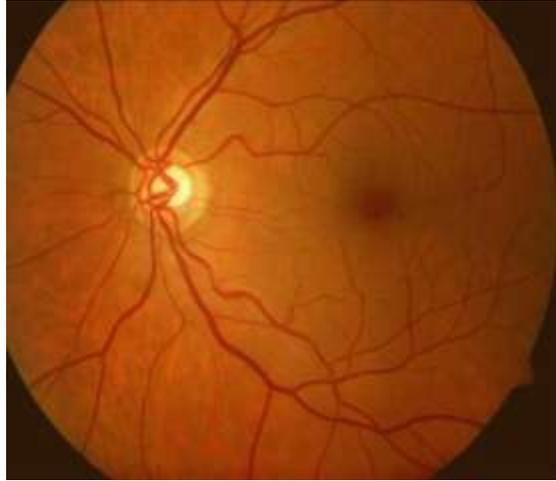


Image 4

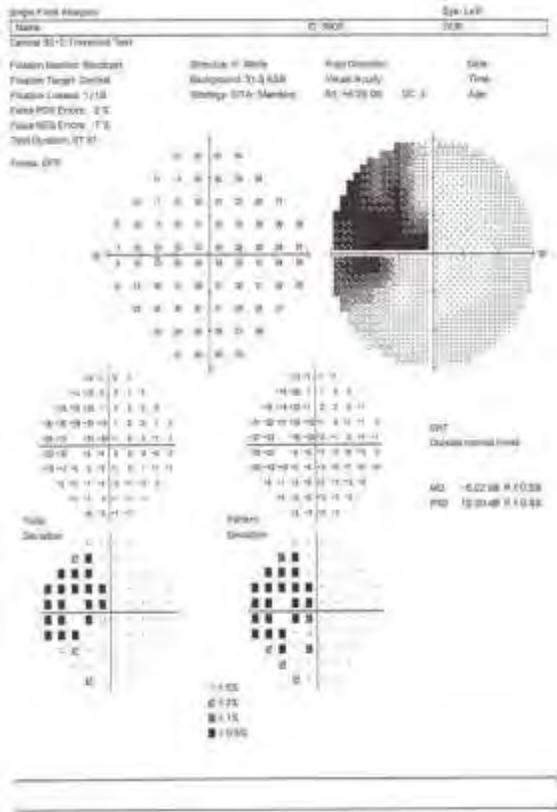


Image 3

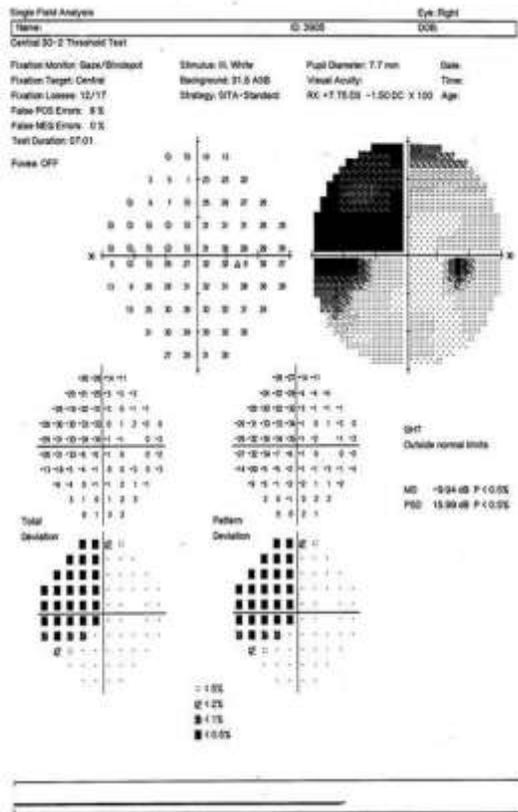


Image 5



Image 6



Correct answer

(Item 1 of Patient 5)

17. Which of the following is the LEAST important to include in the differential diagnosis for this patient?
- a. CVA
 - b. Intracranial mass
 - c. GCA
 - d. TB meningitis

(Item 2 of Patient 5)

18. Damage to which of the following regions BEST explains the visual field results?
- a. Right occipital
 - b. Left occipital
 - c. Right parietal
 - d. Left parietal
 - e. Right temporal
 - f. Left temporal

(Item 3 of Patient 5)

19. Which of the following is the MOST appropriate NEXT step in the management of this patient?
- a. PPD testing
 - b. MRA
 - c. Electroencephalogram
 - d. Oncology referral
 - e. Peripheral vascular referral
 - f. Temporal artery biopsy

(Item 4 of Patient 5)

20. Which of the following conditions is this patient MOST likely to develop?
- a. CRAO
 - b. Cranial nerve palsy
 - c. Subdural hematoma
 - d. Choroidal granuloma
 - e. Normal pressure hydrocephalus